

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
 (Not for submission under 37 CFR 1.99)

| | |
|------------------------|---------------------|
| Application Number | 10567177 |
| Filing Date | 2006-02-03 |
| First Named Inventor | Erlind Thorsteinson |
| Art Unit | 1793 |
| Examiner Name | Joseph Micali |
| Attorney Docket Number | 62575A |

| U.S. PATENTS | | | | | | <input type="button" value="Remove"/> |
|-------------------|---------|---------------|------------|------------|---|--|
| Examiner Initial* | Cite No | Patent Number | Kind Code† | Issue Date | Name of Patentee or Applicant of cited Document | Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear |
| 1 | 4211570 | | | 1980-07-08 | Desplanches, et al. | |
| 2 | 3898094 | | | 1975-08-05 | Holloway, et al. | |
| 3 | 5566755 | | | 1996-10-22 | Seidle, et al. | |
| 4 | 5288371 | | | 1994-02-22 | Rolison, et al. | |
| 5 | 4642360 | | | 1987-02-10 | Nojiri, et al. | |
| 6 | 3972829 | | | 1976-08-03 | Michalko | |
| 7 | 4701437 | | | 1987-10-20 | Boxhoorn, et al. | |
| 8 | 4806518 | | | 1998-02-21 | Boxhoorn, et al. | |

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

| | |
|------------------------|---------------------|
| Application Number | 10567177 |
| Filing Date | 2006-02-03 |
| First Named Inventor | Erlind Thorsteinson |
| Art Unit | 1793 |
| Examiner Name | Joseph Micali |
| Attorney Docket Number | 62575A |

| | | | | | | |
|--|---|---------|--|------------|------------------|--|
| | 9 | 4728634 | | 1988-03-01 | Boxhoorn, et al. | |
|--|---|---------|--|------------|------------------|--|

If you wish to add additional U.S. Patent citation information please click the Add button.

U.S. PATENT APPLICATION PUBLICATIONS

| Examiner Initial* | Cite No | Publication Number | Kind Code ¹ | Publication Date | Name of Patentee or Applicant of cited Document | Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear |
|-------------------|---------|--------------------|------------------------|------------------|---|--|
| | 1 | | | | | |

If you wish to add additional U.S. Published Application citation information please click the Add button

FOREIGN PATENT DOCUMENTS

| Examiner Initial* | Cite No | Foreign Document Number ³ | Country Code ² i | Kind Code ⁴ | Publication Date | Name of Patentee or Applicant of cited Document | Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear | T ⁵ |
|-------------------|---------|--------------------------------------|-----------------------------|------------------------|------------------|---|--|--------------------------|
| | 1 | 9935104 | WO | | 1999-07-15 | Virkar, et al. | | <input type="checkbox"/> |
| | 2 | 9110422 | JP | | 1997-04-28 | Takahashi, et al. | | <input type="checkbox"/> |
| | 3 | 9110421 | JP | | 1997-04-28 | Takahashi, et al. | | <input type="checkbox"/> |
| | 4 | 1501163 | GB | | 1978-03-17 | Broussaud, et al. | | <input type="checkbox"/> |
| | 5 | 172565 | EP | | 1986-02-26 | Nojiri, et al. | | <input type="checkbox"/> |

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

| | |
|------------------------|---------------------|
| Application Number | 10567177 |
| Filing Date | 2006-02-03 |
| First Named Inventor | Erlind Thorsteinson |
| Art Unit | 1793 |
| Examiner Name | Joseph Micali |
| Attorney Docket Number | 62575A |

| | | | | | | | |
|---|---------|----|--|------------|----------------|--|--------------------------|
| 6 | 1600747 | GB | | 1981-10-21 | Hayden, et al. | | <input type="checkbox"/> |
| 7 | 2917590 | DE | | 1980-11-06 | Hartl | | <input type="checkbox"/> |

If you wish to add additional Foreign Patent Document citation information please click the Add button

NON-PATENT LITERATURE DOCUMENTS

| Examiner Initials* | Cite No | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published. | T5 |
|--------------------|---------|---|--------------------------|
| | 1 | ZHAOYIN WEN, ET AL., "Preparation and electrical property of Na. β ./ β -Al203 film", Wuji Cailiao Xuebao (1997), 12(6), 825-829 | <input type="checkbox"/> |
| | 2 | ZHAOYIN WEN, ET AL., "Influences of spinel on phase composition and ionic conduction property of Na-. β ./ β -Al203 film", Yingyong Huaxue (1998), 15 (1), 65-67 | <input type="checkbox"/> |
| | 3 | SCHAFF, ET AL., "In-situ formation of thin-film like β -alumina layers on α -alumina substrates", Ionics (1997), 3 (3 & 4), 277-281 | <input type="checkbox"/> |
| | 4 | YUSHAN YAN, ET AL., "Preparation of Zeolite ZSM-5 Membranes by In-Situ Crystallization on Porous α -Al203", Ind. Eng. Chem. Res. (1995), 34 (5), 1652-61 | <input type="checkbox"/> |
| | 5 | J. S. SUBRAMANIAN, ET AL., "Preparation and properties of two-phase mixed conductors of β -alumina and iron oxide", J. Electrochem. Soc. (1992), 139 (9), 2562 - 6 | <input type="checkbox"/> |
| | 6 | G. A. EL-SHOBAKY, ET AL., "Effects of lithium oxide doping on solid-solid interactions in the cupric oxide-alumina system", Thermochim. Acta (1989), 150 (1), 111-20 | <input type="checkbox"/> |
| | 7 | N. S. YURITSIN, ET AL., "Synthesis of lanthanum aluminate (LaAlO3) with sodium oxide additives", Izv. Akad. Nauk SSSR, Neorg. Mater. (1987), 23 (11), 1871-4 | <input type="checkbox"/> |

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

| | |
|------------------------|---------------------|
| Application Number | 10567177 |
| Filing Date | 2006-02-03 |
| First Named Inventor | Erlind Thorsteinson |
| Art Unit | 1793 |
| Examiner Name | Joseph Micali |
| Attorney Docket Number | 62575A |

| | | |
|----|--|--------------------------|
| 8 | A. K. KURIAKOSE, ET AL., "Polycrystalline sodium-postassium .beta./beta.-alumina", <i>J. Solid State Chem.</i> (1987), 69 (2), 312-19 | <input type="checkbox"/> |
| 9 | G. R. GAVALAS, ET AL., "Alkali-alumina sorbents for high-temperature removal of SO ₂ ", <i>AIChE J.</i> (1987), 33 (2), 258-66 | <input type="checkbox"/> |
| 10 | A. YA. NEIMAN, ET AL., "Mechanism of the preparation of sodium .beta.-aluminates", <i>Zh. Neorg. Khim</i> (1986), 31 (4), 863-8 | <input type="checkbox"/> |
| 11 | L. B. GARRIDO, ET AL., "Kinetic study of the sodium oxide-alumina system: formation of .alpha.-alumina and .beta.-alumina from .gamma.-alumina superficially impregnated with sodium", <i>Rev. Latinoam. Ing. Quim. Quim. Apl.</i> (1984), 14 (1), 67-87 | <input type="checkbox"/> |
| 12 | MARTIN G. BARKER, ET AL., "A new sodium aluminate Na ₁₇ Al ₅ O ₁₆ ", <i>J. Chem. Soc., Chem. Commun.</i> (1982), (9), 516-17 | <input type="checkbox"/> |
| 13 | MARTEN G. BARKER, ET AL., "Preparation and crystal structures of the first alkali rich sodium aluminates Na ₇ Al ₃ O ₈ and Na ₅ Al ₁₀ O ₄ ", <i>J. Chem. Soc., Chem. Commun.</i> (1981), (8), 379-81 | <input type="checkbox"/> |
| 14 | CHANG, BYONG-TAE, ET AL., "Effects of sodium tetraborate as an additive on the reaction of .alpha.-alumina with sodium carbonate", <i>Bull. Chem. Soc. Jpn.</i> (1980), 53 (6), 1600-4 | <input type="checkbox"/> |
| 15 | E. G. SEMIN, ET AL., "Mechanism of formation of chrysoberyl in the presence of heterophasic additives", <i>Zh. Prikl. Khim. (Leningrad)</i> (1979), 52 (7), 1465-8 | <input type="checkbox"/> |
| 16 | V. I. KOVALENKO, ET AL., "Study of the reaction of sodium carbonate with different forms of aluminum oxide", <i>Zh. Neorg. Khim.</i> (1978), 23 (2), 281-5 | <input type="checkbox"/> |
| 17 | ALBERT K. FISCHER, "Atmospheric pressure synthesis for .beta.-lithium aluminum oxide", <i>Inorg. Chem.</i> (1977), 16 (4), 974 | <input type="checkbox"/> |
| 18 | KLARA EROSS-KISS, ET AL., "Infrared spectroscopy study of products resulting from high-temperature solid-phase reactions of potassium carbonate and various oxides", <i>Period. Polytech., Chem. Eng.</i> (1976), 20 (1), 13-23 | <input type="checkbox"/> |

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

| | |
|------------------------|---------------------|
| Application Number | 10567177 |
| Filing Date | 2006-02-03 |
| First Named Inventor | Erlind Thorsteinson |
| Art Unit | 1793 |
| Examiner Name | Joseph Micali |
| Attorney Docket Number | 62575A |

| | | |
|----|---|--------------------------|
| 19 | J. MACAK, ET AL., "Effect of admixtures on the formation of nickel(II) dialuminum oxide in a solid-state reaction", Collect. Czech. Chem. Commun. (1976), 41 (3), 687-94 | <input type="checkbox"/> |
| 20 | SANDOR GAL, ET AL., "Reactions of potassium carbonate with various oxides at high temperatures", Proc. Anal. Chem. Conf., 3rd (1970), Volume 2, 243-8 | <input type="checkbox"/> |
| 21 | ALFRED PACKTER, ET AL., "Kinetics and mechanism of the heterogeneous reactions of .gamma.-,kappa., and .alpha.-aluminas with aqueous sodium hydroxide solutions", J. Chem. Soc. A (1970), (8), 1266-70 | <input type="checkbox"/> |
| 22 | CONSTANTINOS G. VAYENAS, ET AL., "Electrochemical promotion of heterogeneous catalysis", Catal. Today (1999), 51 (3-4), 581-594 | <input type="checkbox"/> |
| 23 | M. MAKRI, ET AL., "The role of the solid electrolyte support on the NEMCA behavior of ethylene oxidation on Pt", Inst. Chem. Eng. Symp. Ser. (1999), 145 (Electrochemical Engineering), 269-280 | <input type="checkbox"/> |
| 24 | C. G. VAYENAS, ET AL., "Non-faradaic electrochemical modification of catalytic activity using ionic and mixed conducting ceramics", Proc.-Electrochem. Soc. (1998), 97-24 (Ionic and Mixed Conducting Ceramics), 509-529 | <input type="checkbox"/> |
| 25 | C. G. VAYENAS, ET AL., "Direct STM, XPS and TPD observation of spillover phenomena over mm distances on metal catalyst films interfaced with solid electrolytes", Stud. Surf. Sci. Catal. (1997), 112 (Spillover and Migration of Surface Species on Catalysts), 39-47 | <input type="checkbox"/> |
| 26 | IAN R. HARKNESS, ET AL., "Ethylene oxidation over platinum: in situ electrochemically controlled promotion using Na-.beta.-alumina and studies with a Pt(111)/Na model catalyst", J. Catal. (1996), 160 (1), 19-26 | <input type="checkbox"/> |
| 27 | R. M. LAMBERT, ET AL., "Electrochemical promotion of alkene oxidation by nitric oxide over platinum-.beta.-alumina.", Book of Abstracts, 211th ACS National Meeting, New Orleans, LA, March 24-28 (1996), COLL-015 Publisher: American Chemical Society, Washington, D.C. | <input type="checkbox"/> |
| 28 | A. C. KALOYANNIS, ET AL., "Electrochemical promotion of catalyst surfaces deposited on ionic and mixed conductors", Ionics (1995), 1 (5 & 6), 414-420 | <input type="checkbox"/> |
| 29 | IAN R. HARKNESS, ET AL., "Electrochemical promotion of the NO + ethylene reaction over platinum", J. Catal. (1995), 152 (1), 211-14 | <input type="checkbox"/> |

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

| | |
|------------------------|---------------------|
| Application Number | 10567177 |
| Filing Date | 2006-02-03 |
| First Named Inventor | Erlind Thorsteinson |
| Art Unit | 1793 |
| Examiner Name | Joseph Micali |
| Attorney Docket Number | 62575A |

| | | |
|----|--|--------------------------|
| 30 | CH. KARAVASILIS, ET AL., "Selectivity maximization of ethylene epoxidation via NEMCA with zirconia and beta"-Al ₂ O ₃ solid electrolytes, Ionics (1995), 1 (1), 85-91 | <input type="checkbox"/> |
| 31 | C. G. VAYENAS, ET AL., "Non-faradaic electrochemical modification of catalytic activity: solid electrolytes as active catalyst supports", Solid State Ionics (1994), 72 (pt2), 321-7 | <input type="checkbox"/> |
| 32 | C. G. VAYENAS, ET AL., "Ion spillover as the origin of the NEMCA effect", Stud. Surf. Sci. Catal. (1993), 77 (New Aspects of Spillover Effect in Catalysis), 111-16 | <input type="checkbox"/> |
| 33 | C. G. VAYENAS, "Electrochemical activation of catalyzed reactions", NATO ASI Ser., Ser. C (1993), 398 (Elementary Reaction Steps in Heterogeneous Catalysis), 73-92 | <input type="checkbox"/> |
| 34 | COSTAS G. VAYENAS, ET AL., "Non-faradaic electrochemical modification of catalytic activity: the work function of metal electrodes in solid electrolyte cells", Solid State Ionics (1992), 53-56 (pt. 1), 97-110 | <input type="checkbox"/> |
| 35 | C. G. VAYENAS, ET AL., "Non-Faradaic electrochemical modification of catalytic activity. 4. Use of .beta.-alumina as the solid electrolyte", J. Catal. (1991), 128 (2), 415-35 | <input type="checkbox"/> |
| 36 | C. G. VAYENAS, ET AL., "Dependence of catalytic rates on catalyst work function", Nature (London) (1990), 343 (6259), 625-7 | <input type="checkbox"/> |
| 37 | C. G. VAYENAS, ET AL., "Non-faradaic electrochemical modification of catalytic activity. Reversible promotion of platinum metals catalysts", Platinum Met. Rev. (1990), 34 (3), 122-30 | <input type="checkbox"/> |
| 38 | CH. KARAVASILIS, ET AL., "In Situ Controlled Promotion of Catalyst Surfaces via NEMCA: The Effect of Na on the Ag-Catalyzed Ethylene Epoxidation in the Presence of Chlorine Moderators", J. Catal. (1996), 160 (2), 205-213 | <input type="checkbox"/> |

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature

Date Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

| | |
|------------------------|---------------------|
| Application Number | 10567177 |
| Filing Date | 2006-02-03 |
| First Named Inventor | Erlind Thorsteinson |
| Art Unit | 1793 |
| Examiner Name | Joseph Micali |
| Attorney Docket Number | 62575A |

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.